



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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May 14, 2008

Ms. Anita E. Masters
Senior NEPA Specialist
Tennessee Valley Authority
1101 Market Street, LP 5U
Chattanooga, Tennessee 37402

Subject: EPA NEPA Comments on TVA's FEIS for "Rutherford-Williamson-Davidson Power Supply Improvement Project; Rutherford, Williamson, and Maury Counties, TN; CEQ #20080141; ERP #TVA-E08022-TN

Dear Ms. Masters:

The U.S. Environmental Protection Agency (EPA) has reviewed the subject Tennessee Valley Authority (TVA) Final Environmental Impact Statement (FEIS) in accordance with our responsibilities under Section 102(2)(C) of the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act. TVA proposes to construct or upgrade a 500-kV substation and associated 500-kV and 161-kV power transmission lines in anticipation of additional growth in Middle Tennessee, which has been rapidly growing since 1990. EPA has previously provided written comments on the Draft EIS (DEIS) for this proposed project in a letter dated November 15, 2007.

TVA initially screened four alternatives for the proposed project. These alternatives might be termed the "new construction" (Rutherford alternative), "new construction and upgrade" (Brentwood alternative), "upgrade" (Pinhook alternative), and "conservation/load management" alternatives. The No Action and one Action Alternative (new Rutherford substation and its associated transmission lines) were carried forward for detailed analysis in the DEIS/FEIS. Page S-2 states that "[c]ompared to the other potential sites and route combinations, the preferred site [substation] and route [transmission line] combinations, the preferred site and routes are expected to have the least overall project impacts and be the most cost-effective solution." However, we note that the "upgrade" alternative would utilize more existing ROW and have no new property acquisition, although blasting would be needed which would have engineering and environmental impacts (pg. 23).

EPA has concentrated its review on TVA's responses to our written comments on the DEIS. These responses are found in Appendix B-2, with a copy of our 2007 comment letter on the DEIS found in Appendix B-1. Consistent with the responses, additional modifications were also made in the text of the FEIS. We appreciate the effort in responding to the comments. EPA offers the following final comments on selected TVA responses:

► **TVA Response #1 (Alternatives: pg. 261)** – This response indicated that the preferred alternative need not be identified until the Record of Decision (ROD). However, it is our understanding that the “preferred alternative” should be identified in the FEIS with few exceptions (e.g., a pending permit review may be biased by a prior identification). The “selected alternative” should then be identified in the ROD. However, given that the Rutherford alternative was the only action alternative carried forward for detailed analysis in the DEIS and FEIS, that it was characterized as the only “viable” electrical solution in this response, and that it was characterized as the “proposed action” in Response #33, it appears that the Rutherford alternative is TVA’s preferred alternative. Nevertheless, a clear identification of the preferred alternative would have been appropriate at the FEIS stage, consistent with NEPA, so that the public is certain what action TVA proposes to take (the ROD may or may not be circulated or read by all if only noticed in the *Federal Register*).

The FEIS paraphrasing of EPA’s comment for this response was not quite accurate. The response indicated that “...the “upgrade” alternative should be a candidate for a detailed EIS.” Our comment was not intended to relate that this alternative be considered in a separate EIS, but rather that it be considered as a candidate for detailed analysis in the current EIS. However, if indeed this alternative does not meet purpose and need as suggested in the response, then it would not be a feasible alternative for this project and could have been dismissed with explanation. Nevertheless, if not meeting purpose and need is related to not being able to meet the 2010 in-service date (i.e., not enough time for taking lines out of service for upgrading before 2010), we recommend that future power needs be feasibly forecasted early enough to allow for upgrade alternatives to be fully considered due to their environmental benefits, including utility collocation and less use of new ROW. However, we note that portions of the proposed action are also to be collocated on vacant, TVA-owned ROW and that the upgrade alternative would require blasting (pg. 16), which would have engineering and environmental impacts.

In addition, potential selection of the Rutherford alternative would not preclude TVA from partially offsetting new alignment impacts by increasing its “green” power offerings to customers. These would include reduction of its baseload, generation of renewable energy and purchase (buyback) of green power from its customers or from other power companies – all of which are apparently planned or being implemented to some degree within TVA (App. C). We recommend the trend to green power options continue to be promoted within TVA, with the goal of reliability increasing and costs decreasing over time.

► **TVA Response #2 (Energy Efficiency Initiatives: pg. 262)** – As suggested above, we appreciate the inclusion of various TVA energy efficiency options in Appendix C. These could be (and apparently are) ongoing regardless of which alternative is selected.

► **TVA Response #3 (Wetland and Streambank Avoidance: pg. 263)** – We note that TVA uses a constraint model to determine more favorable alignments to avoid stream crossings. However, even though NEPA does not require the preferred alternative to be the environmentally preferred alternative, how did model results compare the action

alternative to the other alternatives initially screened (Pinhook and Brentwood) in terms of avoiding stream crossings?

► **TVA Response #7 (Herbicide Use: pg. 264)** – Excellent approach. We agree that manual or mechanical means should be used or considered before herbicides in sensitive areas such as shorelines and caves.

► **TVA Response #8 (Impaired Waterbodies: pg. 264)** – As requested, Section 3.2 describes the impaired waterbodies to be crossed by the action alternative and their pollutants of concern. Would construction and operation of the Rutherford substation and its transmission lines exacerbate any of these pollutants of concern (e.g., siltation)?

► **TVA Response #19 (Forested Wetland Conversion: pg. 267)** – This response states that “ROW clearing would convert approximately 2 to 3 acres of forested wetlands to scrub-shrub wetlands, but basic wetland functions would be preserved.” In principal, we agree that construction and operation of transmission line ROWs and some others (pipeline ROWs) are less intrusive conversions of forested wetlands than say highway corridors since some wetland functions may remain after the transmission and pipeline projects. However, conversion of forested wetlands is nevertheless impactful given the loss of forest habitat and fragmentation of contiguous forest.

► **TVA Response #32 (EJ: pg. 270)** – We appreciate the additional environmental justice (EJ) information in Sections 3.15 and 4.15. For minorities, it appears that the U.S. Census block groups (BG) of concern for the Rutherford substation and associated line alignments generally have demographics with lower minority percentage shares than county, state and national levels (the one exception is in BG 1 in Williamson County with a higher 2000 Census minority percentage (14.8%) than the county (9.8%), but less than the state (20.8%) and nationally (30.9%)). Poverty levels, however, frequently show percentages higher than their county, and sometimes higher than the state and nationally (e.g., CT 103, BG 1 in Maury County shows a 1999 poverty rate of 15.6%, which is greater than the county (10.9%), the state (13.5%) and nationally (12.5%)).

The EJ discussion in Section 4.15 is concentrated on visual effects on minority and low-income populations living near the transmission line. While this is a concern, we are more concerned about any relocations due to the line or substation and the proximity of homes, schools and churches to the ROW, particularly for the 500-kV portions of the line. We suggest that, even though the FEIS often indicates that areas of higher percentages are sparsely populated, that the ROD provide additional information on such relocation and proximity issues which may result from new-location and collocation construction associated with the proposed project. Additionally, the EJ sections could have been further improved if the demographic percentages of the neighboring counties adjacent to those crossed were also documented. This would have provided another perspective, to help ensure that selected counties were not of significantly higher percentages than neighboring counties.

► **TVA Response #33 (EMF: pg. 270)** – We appreciate the electromagnetic field (EMF) information in this response pertaining to ROW buffers and standards. We note that “[t]he *expected* magnetic field strengths at the edge of both the proposed action and the “upgrade” alternative would fall well within these standards.” Will TVA monitor EMFs to verify their strength at the edge of ROWs after prospective transmission line operation (especially for the 500-kV lines)? We suggest some spot monitoring in areas with nearby residences.

► **TVA Response #36 (Noise: pg. 271)** – We appreciate the additional noise information in the text and Appendix O. For future reference, EPA would prefer that the referenced EPA noise “guidelines” be characterized as EPA noise “targets”, since they are recommended noise levels more so than guidelines or standards.

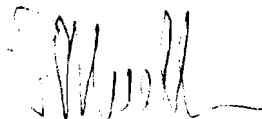
Summary

In conclusion, as a project that involves a high-voltage 500-kV transmission line, EPA agrees with TVA that this proposed action is a significant project worthy of an EIS. Although additional EJ documentation is requested for those BGs traversed with relatively higher EJ percentages, it appears that TVA has overall considered various environmental aspects for this project. These include the use of some existing ROWs, consideration of EMF buffers in planning ROW breadths and alignments, and the preferential use of manual/mechanical means in sensitive areas.

While the Rutherford alternative has merit and is the apparent TVA preferred alternative, the “upgrade” (Pinhook) alternative may be the environmentally preferable alternative in the sense that it would utilize more existing ROW (albeit, there would be blasting). For future upgrade alternatives such as Pinhook which may require more time to take lines out of service for upgrading than the construction of new-alignment alternatives, we recommend that forecasting should, within reason, be anticipatory enough of local power needs to allow for ample time for full consideration of upgrade alternatives. In general, EPA prefers optimizing the collocation of compatible utilities within the same ROW (or widened ROW).

We appreciate the opportunity to review this FEIS. Should you have questions on our comments, please contact Chris Hoberg of my staff at 404/562-9619 or hoberg.chris@epa.gov.

Sincerely,



Heinz J. Mueller, Chief
NEPA Program Office
Office of Policy and Management